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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,005	11/07/2001	Naoto Ikegawa	215900US0	4580

22850 7590 07/16/2003

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EXAMINER

KRUER, KEVIN R

ART UNIT PAPER NUMBER

1773

DATE MAILED: 07/16/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Applicati n No.

09/986,005

Examiner

Kevin R Kruer

Applicant(s)

IKEGAWA ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period of Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. The rejection to claims 7 and , 8 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention has been dropped. The term "plate-form" will be understood to include any particle with an aspect ratio of not equal to 1. Applicant argues that plate-form is defined in the specification on page 11, lines 1-2. However, working examples are not sufficient for defining a term.
2. The rejection of claims 1-11 as indefinite for containing the term "rubber-like" has been overcome by amendment.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, 5, 11, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Ogawa et al (US 5,019,442). Ogawa teaches a substrate layer comprising an ethylene copolymer and a crystalline polyolefin (abstract). The ethylene copolymer may comprise ethylene unsaturated dicarboxylic acid anhydride-acrylic ester terpolymers (col 2, lines 11+) such as ethylene-maleic anhydride-ethyl acrylate (col 3,

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lines 17+). The ethylene copolymer is included in the composition in amounts of 10-95wt% 9col 2, lines 4+). The substrate may be subjected to surface treatment by known methods such as plasma treatment (col 5, lines 1+). The treated substrate is then metallized by vapor deposition (col 5, lines 10+). The composition may further comprise silicone dioxide, and calcium carbonate (col 4, lines 14+).

***Claim Rejections - 35 USC § 103***

4. Claims 1, 11, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et al (US 4,772,496) in view of Applicant's Admissions for reasons of record.

5. Claims 1, 3, 5, 11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admissions in view of Furuta et al (US 6,124,004) for reasons of record.

6. Claims 6-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admissions in view of Furuta et al (US 6,124,004), as applied to claims 1, 3, 5, and 11 above, and further in view of Inoue et al (US 4,943,606) for reasons of record.

7. Claims 1, 11, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Polak (US 4,337,279) in view of Kojima et al (US 4,654,255). Polak teaches a metal clad polymer that has been treated with gas plasma prior to deposition of the metal. The gas plasma treatment improves the peel strength of the laminate (abstract). The polymer material may be selected from the group consisting of polyamides, acetals, polyolefins, polyphenaline sulfides, and the like (col 2, lines 37+). Deposition of the

metal may be accomplished by any means known in the art, such as supporting, electrolysis, evaporation, pressing, etc. (col 3, lines 39+).

Polak does not teach that the substrate should comprise the claimed composition. However, Kojima teaches a composition comprising an epoxy-containing olefin, an ethylenically unsaturated fatty acid (abstract), and a polyolefin resin composition (col 5, lines 1+). The epoxy-containing olefin is comprised of 50-99.6% ethylene, 0.05-50wt% glycidyl group containing monomer, and 0-49.95wta% of an ethylenically unsaturated monomer (col 2, lines 28+). Suitable copolymers include ethylene-glycidyl methacrylate-ethyl acrylate (example 3). Said composition has improved adhesion to a variety of substrates (col 5, lines 8+). Thus, it would have been obvious to one of ordinary skill in the art to utilize the composition taught in Kojima

8. Claims 1, 3-5, 7, 9-12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Polak (US 4,337,279) in view of Orikasa et al (US 5,179,160). Polak teaches a metal clad polymer that has been treated with gas plasma prior to deposition of the metal. The gas plasma treatment improves the peel strength of the laminate (abstract). The polymer material may be selected from the group consisting of polyamides, acetals, polyolefins, polyphenaline sulfides, and the like (col 2, lines 37+). Deposition of the metal may be accomplished by any means known in the art, such as supporting, electrolysis, evaporation, pressing, etc. (col 3, lines 39+).

Polak does not teach that the substrate should comprise the claimed composition. However, Orikasa teaches a thermoplastic resin composition comprising 50-99wt% of a polyamide resin, and 50-1wt% of a multiphase structure thermoplastic

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resin composed of 5-95wt% ethylene copolymer such as epoxy group containing ethylene copolymers (abstract). The polyamide may comprise terephthalamide, or isophthalamide (col 3, lines 50+). The multiphase thermoplastic resin may comprise 60-99.5wt% ethylene, 0.5-40wt% unsaturated glycidyl group containing monomer, and 0-39.5wt% of at least one other unsaturated monomer (col 5, lines 32+). Examples of such resins include ethylene-glycidyl methacrylate-ethyl acrylate copolymer (col 4, lines 64+). The composition may further comprise inorganic filler in amounts of 1-50 pbw (col 9, lines 3+). Suitable filler include spherical, needle, and fibrous fillers such as talc, mica, glass, and the like (col 9, lines 8+). The composition exhibits excellent mechanical toughness, durability, solvent resistance, hygroscopicity, moldability, and impact resistance (col 1, lines 7+). Thus, it would have been obvious to utilize the composition taught in Orikasa as the substrate taught in Polak because said composition exhibits improved mechanical toughness, durability, solvent resistance, hygroscopicity, moldability, and impact resistance.

9. Claims 1, 3, 11, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Polak (US 4,337,279) in view of Takahashi et al (US 5,418,286). Polak teaches a metal clad polymer that has been treated with gas plasma prior to deposition of the metal. The gas plasma treatment improves the peel strength of the laminate (abstract). The polymer material may be selected from the group consisting of polyamides, acetals, polyolefins, polyphenylene sulfides, and the like (col 2, lines 37+). Deposition of the metal may be accomplished by any means known in the art, such as supporting, electrolysis, evaporation, pressing, etc. (col 3, lines 39+).

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Polak does not teach the claimed resin composition. However, Takahashi teaches a polyacetal composition comprising 0.01-15wt% of an epoxy containing polymer. The epoxy-containing polymer comprises homopolymers, copolymers, and terpolymers of epoxy containing polymers (col 2, lines 60+) such as ethylene, ethyl acrylate, glycidyl methacrylate (col 5, line 39) or a graft copolymer of ethylene glycidyl methacrylate and styrene acrylonitrile (col 5, lines 64+). Said composition exhibits excellent tensile strength after long term aging (abstract). Thus, it would have been obvious to utilize the composition taught in Takahashi as the substrate taught in Polak because said composition exhibits improve tensile strength properties.

#### ***Response to Arguments***

Applicant's arguments filed May 5, 2003 have been fully considered but they are not persuasive. Applicant argues that Maeda does not disclose one of the claimed elastic materials. The examiner respectfully disagrees. Maeda teaches the use of ethylene-glycidyl methacrylate-ethylene ethyl acrylate copolymer (Mixture III). The examiner notes that ethylene-glycidyl methacrylate-ethylene ethyl acrylate and ethylene-glycidyl methacrylate-ethyl acrylate are different notations for the same polymer.

Applicant further argues that Furuta fails to teach the claimed elastic material. The examiner respectfully disagrees. Furuta teaches the use of ethylene-ethyl acrylate-glycidyl methacrylate (col 16, lines 35+).

Thus, Applicant's arguments are not persuasive.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R Kruer whose telephone number is 703-305-0025. The examiner can normally be reached on Monday-Friday from 7:00a.m. to 4:00p.m.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau, can be reached on (703) 308-2367. The fax phone number for the organization where this application or proceeding is assigned is 703-305-5408.



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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

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KRK

  
Paul Thibodeau  
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